



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/667,769	09/22/2000	Kotaro Endo	04329.2431	8176

22852 7590 12/23/2003

FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER
LLP
1300 I STREET, NW
WASHINGTON, DC 20005

EXAMINER

EL CHANTI, HUSSEIN A

ART UNIT	PAPER NUMBER
----------	--------------

2157

DATE MAILED: 12/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/667,769

Applicant(s)

ENDO ET AL.

Examiner

Hussein A El-chanti

Art Unit

2157

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

1. This action is responsive to application filed on Sep. 22, 2000. Claims 1-15 are pending examination.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-9 and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Carter et al., U.S. Patent No. 6,553,401.

As to claim 1, Carter teaches a method for determining a server computer which carried out a process most recently, applicable to a high availability computer system comprising a master server computer and a slave server computer each having a storage unit, the method comprising the steps of:

executing state-transition of said two server computers when a fault occurs in the server computer or the server computer is restored from the fault (see col. 2 lines 20-27 and col. 6 lines 12-35);

storing a priority determined by the state transition into the storage unit (see col. 6 lines 55-col. 7 lines 4);

determining, when the server computer is restored from the fault, whether or not the priority of the server computer restored from the fault is higher; and determining that the server computer restored from the fault becomes a server computer to take over a process, when the priority of the server computer is higher (see col. 7 lines 5-42).

As to claim 2, Carter teaches the method according to claim 1, wherein the step of:

determining the priority further including the step of comparing the priorities of the server computers when the server computers are restored from the faults so as to determine which priority is higher (see col. 7 lines 5-42).

As to claim 3, Carter teaches the method according to claim 2, wherein the step of:

determining the priority further including the steps of determining, when, faults occur in the server computers and after that, one thereof is restored from the fault, whether or not the priority of the server computer restored from the fault is the highest priority (see col. 7 lines 5-42); and

determining that the priority of the server computer is higher only when the priority is determined to be the highest priority (see col. 7 lines 5-42).

As to claim 4, Carter teaches the method according to claim 3, wherein each of the server computers constructed to assume four states, which are master state in which the server computer carries out the process and has a mate which takes over the process, single master state in which the server computer carries out the process and

has no mate which takes over the process, slave state in which the server computer does not carry out the process but has information necessary for taking over of the process, and halt state in which the server computer does not carry out the process and holds no further information necessary for taking over of the process (see col. 7 lines 5-53).

As to claim 5, Carter teaches the method according to claim 4, wherein the step of storing the priority further including the steps of:

changing the priority of the server computer so as to indicate the highest priority when the state of the server computer is changed to the single master state
changing the priority of the server computer so as to indicate the second highest priority when the state of the server computer is changed to the master state (see col. 7 lines 5-25);

changing the priority of the sever computer so as to indicate the lowest priority when the state of the server computer is changed to the slave state; and
prohibiting a change of the priority of the server computer when the state of -the server computer is changed to the halt state (see col. 7 lines 28-42).

As to claim 6, Carter teaches the method according to claim 4, wherein the step of executing the state-transition further including the steps of:

executing, when faults occurs in said server computers and after that, said server computers are restored from the faults, the first state-transition such that one of said server computers is changed from the halt state to the single master state while the other one is changed from the halt state to the slave state, based on at least the result

of determining that the given server computer becomes a server computer to take over a process (see col. 6 lines 40-col. 7 lines 3); and

executing, after the first state-transition is completed, the second state-transition such that the one server computer is changed to the master state while the other one remains in the slave state (see col. 6 lines 40-col. 7 lines 3).

As to claim 7, Carter teaches the method according to claim 4, wherein the step of executing the state--transition further including the steps of:

executing the third state-transition such that the server restored from the fault is changed from the halt state to the single master state or keeping the current state, based on at least the result of determining that the server computer restored from the faults becomes a sever computer to take over a process, when faults occur in said server computers and after that, any one thereof is restored from the fault (see col. 6 lines 29-54); and

executing, when after -the step of executing the third state-transition or keeping the current state is completed, the other server computer of said server computers is also restored from the fault, either the fourth state-transition such that the other server computer is changed from the halt state to the slave state or the fifth state-transition in which any one of said server computers is changed to the single master state while the other one is changed to the slave state (see col. 6 lines 29-54).

As to claim 8, Carter teaches the method according to claim 3, wherein the step of executing the state-transition further including the step of:

executing, after faults occurs in said server computers and then, only any server computer is restored from the fault, the state-transition of the server computer such that the server computer is a server computer which continues the process, when the server computer is not capable of being determined to have a priority higher than the other server computer, because the priority stored in the storage unit of the server computer restored from the fault is not the highest priority and then, a forced start instruction for forcing the server computer to continue the process is given from outside (see col. 6 lines 45-col. 7 lines 40).

As to claim 9, Carter teaches a high availability computer system comprising a master server computer and a slave server computer each having a storage unit, each of said server computers comprising:

state-transition means for executing a state transition of said server computers when a fault occurs in the server computer or the server computer is restored from the fault; state writing means for storing a priority determined by the state-transition into the storage unit (see col. 2 lines 20-27 and col. 6 lines 12-35);

first determining means for determining, when the each server computer is restored from the fault, whether or not the priority of the each server computer is higher; and second determining means for determining that the each server computer restored from the fault becomes a server computer to take over a process (see col. 7 lines 5-42).

Second determining means for determining that the each server computer restored from the fault becomes a server computer to take over a process (see col. 7 lines 5-42).

As to claim 15, Crater teaches a computer readable recording medium storing a program for determining a server computer which carried out a process most recently applicable to high availability computer system comprising a master server computer and a slave server computer each having a storage unit, the program comprising:

code means for when a fault occurs in the server computer or the server computer is restored from the fault, making the server computer execute state transition of said server computers (see col. 2 lines 20-27 and col. 6 lines 12-35;

code means for making the server computer store a priority determined by the State-transition into the storage unit (see col. 6 lines 55-col. 7 lines 4);

code means for when the server computer is restored from the fault, making the server computer restored from the fault determine whether or not the priority of the server computer restored from the fault is higher (see col. 7 lines 5-42); and

code means for making the server computer restored from the fault determine that the server computer restored from the fault becomes a server computer to take over a process, when the priority is higher (see col. 7 lines 5-42).

3. Claims 10-14 do not teach or define any additional limitation over claims 1-9 and therefore are rejected for similar reasons.

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Performing Concurrent Transactions In A Replicated Database Environment by Gostanian et al., U.S. Patent No. 5,781,910.

- Multifunction Server Input/Output Subsystem And Method by Jones, U.S. Patent No. 5,757,642.
- Apparatus And Methods For Highly Available Directory Services In The Distributed Computing Environment by Elnozahy, U.S. Patent No. 6,014,686.


5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hussein A El-chanti whose telephone number is (703)305-4652. The examiner can normally be reached on Mon-Fri 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (703)308-7562. The fax phone number for the organization where this application or proceeding is assigned is (703)746-9679.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

Hussein El-chanti

Dec. 3, 2003


ARIO ETIENNE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100